

VIAE FELICITATIS: THE BEGINNING YEARS OF THE CALIFORNIA BOTANICAL SOCIETY<sup>1</sup>

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Mr. Toastmaster and old-time friend: Doctor Foxworthy, Past President of the Society, I salute you: Mr. President of the Society: Members and Guests.

At this silver jubilee happiness for good reason pervades this large gathering. It is a sign of continued vitality that the California Botanical Society this year elected as its president, Professor Howard E. McMinn of Mills College. It is also a source of gratification to me personally to find him occupying the president's chair. Naturally my mind, tonight, goes back to the very beginnings of the Society in 1913, and various happy reflections arise in memory. The backbone of the Society, the most eligible and vital part of the membership, in the earliest years, consisted in the main of those who were not professional botanists in the strictest sense, but men in other fields, most often in fields of applied botany such as agriculture, horticulture, agronomy, silviculture or forestry; but also including men in medicine, dentistry and pharmacy and various business occupations. There was reason for this. It was partly because there were extremely few professional botanists in California at that time, but there was another reason to which I shall advert later. Practically all of these persons who gave the Society its most solid support, and many others equally valuable as members, had a college bachelor's degree in botany, or a master's degree, or a doctor's degree. It will be interesting to recall a few that come to mind. Professor William T. Horne, now of the Citrus Experiment Station, a plant pathologist with the soundest kind of training; Professor W. W. Mackie, of the College of Agriculture, an able agronomist and world traveler; Dr. H. J. Webber, of the College of Agriculture, horticulturist and geneticist, a man with a distinguished scientific record who was the discoverer of motile spermatozooids in

<sup>1</sup> Response at the Annual Dinner of the Society held in Berkeley on April 23, 1938. The Toastmaster was Dr. W. W. Robbins, College of Agriculture at Davis. Past President F. W. Foxworthy, long a forest officer in the Federated Malay States, is now a resident of Berkeley. The President of the Society, Professor H. E. McMinn, introduced the Toastmaster. Those botanists from a distance included Dr. C. B. Wolf, Botanist at the Rancho Santa Ana Botanic Garden, Anaheim; Mr. Elmer I. Applegate, Palo Alto; Dr. Carl Epling, Associate Professor of Botany in the University of California at Los Angeles; Mr. M. Van Rensselaer, Director of the Blaksley Botanic Garden at Santa Barbara; Dr. H. F. Copeland, Professor of Botany in the Sacramento Junior College; Dr. L. H. Knoche of San Jose; Professor D. H. Campbell, Professor Geo. J. Peirce, Professor L. R. Abrams, Professor Ira L. Wiggins and Professor L. R. Blinks of Stanford University; Dr. E. B. Copeland of Chico; Mr. H. A. Dutton of Los Altos; and Dr. D. D. Keck of the Carnegie Institution at Stanford. The major portion of the members present at the dinner came from San Francisco, Burlingame, Oakland and Berkeley. Professor Peirce, a Past President of the Society, read the congratulatory messages from absent members.

*Zamia*, a genus of cycads; Dr. Herbert M. Evans, of the School of Medicine of the University of California, who never forsook his early love for botany; Elizabeth Smith, plant pathologist in the College of Agriculture, one-time officer of the Society; Professor P. B. Kennedy, a skillful agronomist, who had his doctor's degree in botany from Cornell University, and who was for a time president of the Society; Albert Walker, a pharmacist, who always increased the value of field trips by his knowledge of applied botany as did Dr. A. W. Card, a dentist; F. W. Koch, who was then in charge of the department of biology in the Galileo High School at San Francisco, added his store of field knowledge to the Society's interests; in his youth he had been attached in a minor capacity to the Death Valley Expedition of the United States Biological Survey and never forgot his field experiences with C. Hart Merriam and F. V. Coville; Frederic T. Bioletti, viticulturist in the College of Agriculture, who always remembered vividly the botanical collecting trips of his early days and thrilling discoveries of new species. One of the most valuable and loyal members was Dr. W. C. Blasdale. Although his profession was that of a professor of chemistry in the University of California, botany was with him a capital hobby; he had done much field work and his published papers on botanical subjects are critical contributions to their field. Many, many others could be mentioned if there were time to list them.

The first secretary of the Society was Mrs. D. W. de Veer. If wisdom be the art of so using knowledge or facts as to produce the most satisfactory results, Mrs. de Veer had much wisdom and handled our affairs to advantage. The numerous field trips scheduled by the Society in that early day necessitated a great deal of clerical work. On account of our extremely limited funds it was a rigid rule that all this clerical work must be done by members. Sometimes volunteers were ready, at other times perhaps not so ready. Sometimes I would make appeal in the name of the great Swedish botanist, Linnaeus, or of Theophrastus the Greek, without finding my office door blockaded by helpers.

The first person in these United States to put the unemployed to work was Tom Sawyer. The original Tom Sawyer of the California Botanical Society was our second secretary, Miss Anna Ehlers, who had been a student under that great teacher of botany, Professor Charles E. Bessey of the University of Nebraska. She had not the slightest difficulty in putting members to work. Indeed, it was a byword of that time that she made them work like Trojans. During my long tenure as president of the Society, the secretary of the Society in her capacity as secretary would often look at me reproachfully on account of my numerous shortcomings and perhaps I had reason, therefore, to be thankful that Miss Ehler's disposition was entirely amiable. The next secretary was Professor H. E. McMinn of Mills College, but inasmuch as he lived some distance away from our headquarters it was Mrs.

Adeline Frederick, Assistant Secretary of the Society, who did most of the secretarial work. She brought to the task a remarkable sense of perception and a sagacity and soundness of judgment that furthered the Society's progress in stabilizing ways that are observable to this day. Succeeding Mrs. Frederick as secretary was Mrs. Linda Dodd. It was her function, on account of the years in which she served, to pour oil on troubled waters. She successfully smoothed out many a rough spot and saved us many an inconvenience.

Another early member, for a time an officer of the Society, was Dr. C. B. Bradley, Professor of Rhetoric. We spoke of him as a good man gone wrong. In his early years he had a few happy weeks in the herbarium of Asa Gray and missed becoming a botanist by only a narrow margin. Never, though choosing the field of English, did he lose his early interest in botanical science. His published papers on botanical subjects are soundly, carefully and conscientiously done, and are true scientific contributions. In questions of taste and language he was our undisputed arbiter, especially in problems of transliteration of Greek roots into Latin or directly into English. If there were doubt about a Greek diphthong, as to whether transliteration should be literal or otherwise, we accepted his judgment as infallible. There is an anecdote concerning him, involving a curious case of transliteration, which I would tell if ladies were not present. Oh, well, I'll tell it anyway. Women should not become members of the California Botanical Society unless they are willing to take the risks of the Society. One summer Professor Bradley was in the Sierra Nevada with a small party of young men, naturalists all. One day, being unwell, he elected to stay in camp and write a letter. The cook of the party was a foreigner of the lower class whose English vocabulary was extremely limited but who thought he understood what was said to him. When the cook reported to Professor Bradley for orders, in that careful and precise speech for which he was famous, Professor Bradley said to him: "A cup of tea is all I wish; that will fully meet my requirements. As for the young gentlemen they must speak for themselves. I could not order for them." The cook was a little bewildered by this, but thought he understood fully. When the ravenously hungry field crew came into camp and found no food ready, the cook was taken to task but he defended himself. "But," said one, "didn't Professor Bradley tell you to get up our grub?" "No," said the cook. "But he told you something; what did he say?" Said the cook: "He said, 'By Jinx, I'm all right, but them blankety blankety guys can go blankety blank.'" When Professor Bradley was told of this case of transliteration, he enjoyed it as hugely as anyone else, for he had a deal within him of the liveliest fun and humor.

In the year 1901 there called upon me at my laboratory in Berkeley a research botanist who had come to the Pacific Coast

to investigate botanically the sources of the drug cascara sagrada, which is derived from the tree, *Rhamnus Purshiana*. He had been sent by the Wellcome Research Laboratories of the great London drug and chemical firm, Burroughs and Wellcome. This botanist's name was P. E. F. Perrédès. In his surveys up and down the Pacific Coast he accumulated a store of highly interesting facts regarding our species of *Rhamnus*, the amount of variation in *Rhamnus Purshiana* as it ranged south into California, the places where it interbred with *Rhamnus californica*, and the extent to which the bark supply was adulterated by *Rhamnus californica* bark, which had quite the same cathartic properties but different therapeutic values. I extended to Perrédès every hospitality and aid, and he was most generous in sharing his knowledge; but it struck me that in such a case as this the hospitality of any one individual was inadequate and that there should be a botanical society in order to fully honor him. Perrédès was a jolly soul and vastly interested in the social habits and ways of my countrymen. One day he came into my laboratory and exclaimed very genially: "You Americans are a very curious people!" I replied, "Certainly we are. Go ahead." "You are a very strange people," he went on. "I observe that you sweep your parlors with a lawn-mower; you take up the collect in church with a fry-pan; you brush your clothes with a broom; and bless my soul, you call a pram a baby-carriage." There were before and after this many other foreign botanists, some of them highly distinguished men, who visited California in those years, botanists from Europe, Australia, New Zealand, Japan and South Africa. In my very early years at Berkeley one of these visitors was Dr. Paul Knuth from Kiel, Germany, the author at a later time of a monumental "Handbook of Flowers and Pollination." Of him I still have a lively picture in my memory, as dressed in a tropical suit he ran hither and thither in the Garden of Native Plants capturing insects with his net. Such travelers continued to appear in California and it was constantly borne in upon me that there should be a botanical society to greet them, honor them and benefit by their presence.

As planned it was determined in my mind that such a botanical society must needs envision four things: 1. It must be a state-wide botanical society. 2. Its field of research must be the whole of western America. 3. It must have a printed journal in order to keep touch with its scattered membership. 4. It must have world relations and a world point of view and keep abreast of the progress of botanical science in every land by honoring in its public meetings botanical travelers from all parts of the earth who would interpret for us the research results of their country. These were the four primary objectives.

By means that were highly fortunate the Society to some degree realized these objectives within a few years. While the strength of the membership was in the cities of the San Francisco

Bay region, almost immediately botanists in various and often distant parts of California joined the Society and kept up their membership for decades, even though unable to attend a single meeting of the Society. If these members in remote or lonely places botanically could have a durable trace of light connecting them with the Society by receiving the Society's meeting notices they were happy to lend their continued support to a botanical organization and cooperate in its work. Mrs. Clara A. Hunt of Saint Helena kept up her membership faithfully for years, though never attending a Society meeting. But the inspiration derived from membership caused her to stir up Napa Valley botanically each year with an exhibition of native plants in the beautiful grounds of her Saint Helena home. Mr. Milo N. Wood, pomologist of the United States Department of Agriculture, who was stationed at Sacramento, an expert on *Juglans regia*, maintained his connection with the Society indefinitely; and Mrs. Harriet P. Kelley, at Selma in Fresno County, started a branch of the Society at that place which flourished as long as she was resident there.

For its journal the name MADROÑO was chosen, because MADROÑO is euphonious, because it makes a brief and handy title, because it is a name associated with the region, because, most of all, it is the name of the native arbutus tree which has great biological and forestal significance. The native vegetation of California is not merely rich and varied to a remarkable degree; it has also an extraordinary geographic significance and an almost ponderous relation to geological history. In such a land a botanical journal must in every way be original and filled with original articles. It is unthinkable that with such a physical background, with such a geographic region as our field, that the Society should in any way copy the journals or adopt the *mores* of older lands; it is unthinkable that it should so lack in originality as to call its journal, for example, a bulletin, which word used a thousand times means perhaps nothing, perhaps anything. There is a great deal in a name if it be original. The name MADROÑO for our journal was an original thought happily seized by the imagination. It means so vastly more than bulletin that it at once puts the journal on a different plane. In addition to the original articles a portrait of a distinguished botanist or botanical explorer having to do with botany in California was planned as a frontispiece for each volume, thus placing upon each volume a fitting and distinctive seal. Volume one carries as frontispiece the portrait of Archibald Menzies, the botanist of the Vancouver Expedition, the first botanist to collect in any marked degree in California and whose name is inseparably associated with many of our most characteristic plants as discoverer, and especially with *Arbutus Menziesii*, the madroño. The second volume uses as frontispiece the portrait of the distinguished botanist, Thomas Nuttall, who came to California in 1836. It was believed

that if the journal fortunately continued and attained to a dozen or twenty volumes or more, this one feature alone would give it an original interest to all botanists in every land.

The fourth condition that the society establish world relations was auspiciously begun when five months after its first meeting it entertained at dinner the members of the International Phytogeographic Excursion, which included amongst them some of the more distinguished botanists of the earth. The party included Dr. Adolf Engler of Berlin; Professor C. von Tubeuf of Munich; Dr. Edward Rübel, Dr. H. Brockmann-Jerosch and Professor Carl Schröter of Zürich; Professor A. G. Tansley of Cambridge, England; Dr. T. J. Stomps of Amsterdam; Dr. Ove Paulsen of Copenhagen; Dr. Carl Skottsberg then of Uppsala; Professor H. C. Cowles of Chicago; Dr. A. Dachnowski of Columbus; Professor and Mrs. F. E. Clements of Minneapolis; Mr. Geo. D. Fuller of Chicago; and Dr. Geo. E. Nichols of New Haven. Over one hundred members of the Society and their friends joined in a demonstration of hospitality to these guests. The arrangements and service were all that could be wished, the dinner being held in a quite noble private dining room of the Hotel Oakland.

The main festival of the Society in its year of activity is the annual dinner, which has been held regularly each year since the first one in 1913. At this dinner it has often been possible to have as chief speaker a visiting European or eastern botanist or botanical traveler from some part of the earth. Greetings are read from absent members and usually some five or six members talk a few minutes before the main speaker comes on.

The importance of this function, extending hospitality to botanists from other lands, cannot well be overestimated. The flora of western America nor that of California is not a vegetation apart, but is involved in its history with all other vegetation areas of the earth. Political boundaries, of course, have no significance. The same thought applies to botanists themselves. When one is reading Schimpfer's "Pflanzen-geographie," Linnaeus' "Fundamenta Botanica" or the "Enquiry into Plants" by Theophrastus, one never thinks of these botanists as belonging to any particular race or state but only as belonging to the company of scientists who have in every age carried forward the light of rationalism. Scientists in the world are a very small group, but they are the only men in any land who have with each other a common understanding, who are able to arrive at common judgments, because they are the only men whose decisions are arrived at purely on the basis of scientific facts, whose decisions are purely objective. In their mental processes, motives of race, country, creed, political orders or social emotion are wholly lacking. It is, therefore, fitting that in our land of California there should be a botanical group which does its share to tend the flame of pure rationalism as a signal and a sign to similar groups in other lands about the earth.

Since the idea of a Society was definitely conceived in the year 1902, some one may note the lapse between that date and the year 1913 when the Society was founded. The answer is not easy to express. Of professional botanists in California at that early day there were but few outside two small groups, one at Stanford University and the other at the University of California. There was no intercourse between the men of these two groups. The men at Berkeley had never called on the men at Stanford, the men at Stanford had never come to Berkeley. The only exception to this rule was myself. I had been down to the Stanford Department of Botany a few times. Eventually I decided to go ahead with the formation of a society, believing that when the botanists of the state generally were members these two groups would follow. It was certainly not to be expected that the professors at Stanford would travel the long distance to Berkeley to join a local society, a society having to do merely with Berkeley. It was obvious the Society must first establish proper claims to support. That judgment as to the Stanford group proved correct. As soon as it was possible I went down to Berkeley more frequently. It was not difficult to win to membership so good-natured and genial a man as Dr. LeRoy Abrams and in time he was elected a vice-president of the Society. In 1918 the dean of the summer session at the University of California was Walter Morris Hart, a distinguished scholar and gentleman. I was given an opportunity to nominate the professor of botany in the summer session and I nominated Professor George James Peirce of Stanford University. Professor Peirce was called. He came to Berkeley for the summer, brought Mrs. Peirce and his three charming daughters, and all the family enjoyed themselves hugely. He came again the next year and possibly a third year, though I have forgotten. In any event it led to relations which were to prove of great importance to the California Botanical Society later on. A few years later Professor Douglas Houghton Campbell became a member. This accession led to certain associations which might otherwise have been missed.

Only yesterday I had a letter stamped by the military censor from my niece who is in Spain. In the city where she lives the alarm sounded, warning of the approach of a bombing plane with its bombs dealing a terrible death to people and ghastly destruction to buildings. Immediately, with her servants she fled to the bomb-proof shelter where she was joined by the members of a neighboring family. The mother of this family, however, on getting half way to the shelter remembered that a rug sent home from the cleaners had been left rolled up on the floor. She could not bear the thought that some one might come and find the room untidy, and so went back, unrolled the rug properly and then joined her family in the shelter. This is what might be called devotion to, enthusiasm for an ideal.

The enthusiasm of the early members of the Society for the welfare of the Society was like that. From the very beginning there was this deep enthusiasm. Those who joined in the Society's work took the greatest possible interest in it; they felt honored to be a part of it. I recall, almost at random, the loyalty of Inez Ray Smith of Hillsborough, the wife of Mr. James Bernard Smith. She made the flora of San Mateo County her specialty and usually led the field trips scheduled for that region. She took pains to go over the ground in advance so that the excursion might be in every way most profitable to the members and nothing missed. I observed that in addition to her scientific interest she had an appreciation of the beauties of nature in its manifold forms. It is probable that this esthetic appreciation was an inherited characteristic, since she was a cousin of the distinguished American artist, Charles Dana Gibson. Both Mr. and Mrs. Smith enjoyed greatly their connection with the Society which led directly to their financial aid to the Department of Botany at Mills College and their support of the research work of various California botanists.

As time passed the Society gradually drew into its fold botanists far and near about the state and took pride in its accessioned members, of whom I can only mention a few. Dr. L. H. Knoche, who had his undergraduate training under Professor W. R. Dudley, went to the University of Montpellier in France to study plant geography under Professor Charles Flahault. While in France he became interested in the problems of the Mediterranean flora and produced his classical four-volume work, "Flora Balearica," a phytogeographical study of the Balearic Islands. Later he returned to the United States, settled once more in his boyhood home of San Jose, built an herbarium building for his herbarium of over 100,000 specimens and a botanical library of approximately 12,000 volumes and 35,000 pamphlets. Milo S. Baker, another member, in his early years a well-known explorer of northeastern California, later resided in Sonoma County, and as professor of botany in the Santa Rosa Junior College, brought together an admirable local herbarium and specialized on the genus *Viola*. Carlotta Case Hall, whose interests centered on Pteridophyta and especially the ferns of California, was another delightful member of early days. Others of note were Dr. E. P. Meinecke, pathologist in the United States Forest Service, and Dr. Charles Piper Smith, of the San Jose High School, who left the eastern United States and settled in California for the field advantage of his critical studies on the genus *Lupinus*.

The field trips, some twenty to forty a year, were always a very important part of the Society's programmes in early years and were well attended. For at least a decade, a "camping trip," covering two or three days in the field, was arranged for the end



of May. One such excursion in 1921 was made to the Mayacamas Range in Mendocino County where, on a high mountain side, are situated the native plant gardens of Carl Purdy. Some one hundred members formed the party, including a number of zoologists. The camp spot was situated in a most delightful vale where the natural conditions had never been disturbed.

Such field trips were of great profit to nurserymen, horticulturists and foresters and to teachers in the schools, especially to those who had recently come to California from the eastern United States and thus found an unfamiliar flora. The values of field experience were various and are not easy to summarize in a few words. It sometimes happened that members who had no particular bent for the critical side of either plant ecology or plant taxonomy yet developed certain natural history interests of importance. An illustrative example is that of Mrs. Ynes Mexia whose inspirations were derived from the Society. She made successful collecting trips to Mexico, and later, from 1929 to 1932, went to South America. On one of her expeditions she proceeded from the eastern coast of Brazil to the headwaters of the Amazon River and thence over the Andes, most of the way with only Indian canoemen, to Peru. The plant materials which she gathered on this trip are of real importance to botanists and will permanently associate her name with certain phases of South American botany. In addition, botanists from foreign countries appreciated the Society's field excursions. One recalls Dr. Alice Scouvert, a student of Professor Jean Massart of the University of Brussels, who, coming to live in California for a few years, taught some of our members the values lying in the scientific names of plants.

The field trips were unquestionably a great tonic and it were unfortunate if they lapsed entirely. One field trip a year, planned with elaborate care, to some remarkable area in California, would attract attendance from the eastern United States and give us the advantage of more frequent association with distant botanists. There is no botanist or botanical traveler or layman interested in the native plants but would wish to see first of all six notable plant associations in California, namely, the Torrey pines association on Santa Rosa Island; the Joshua tree or yucca association on the Coolgardie Yucca Mesa in the east central Mohave Desert north of the Calico Mountains; the big tree association in the Giant Forest at Round Meadow above Kaweah; the serpentine association in eastern Lake County; the redwood association of Prairie Creek in Humboldt County; and the Bishop pine-beach pine association on the Mendocino Coastal Plain. It were impossible to say which of these associations is the more remarkable, since they are all so utterly different and are, indeed, not comparable; but none of them is as yet botanically well known. All await intensive study.

On the Mendocino coastal plain are almost incredible sights: bishop pine and beach pine growing to their full stature 50 to 75 feet high in loam soil; a few yards away the same species dwarfed down to mere canes but coming into reproductive maturity and bearing cones when only 1 to 2 or 3 feet high. A short time ago I discovered on broken and difficult terrain a cluster of the Mendocino cypress, a small colony of about twenty-five trees, that probably represent the largest individuals of true cypress in the New World. Standing before these trees one feels as if he were in the presence of *Sequoia gigantea*. The trunks go on up and up and up without sensible diminution in size to a small rounded crown of short branches. One-eighth mile away on the gypsum soil this same species occurs as tiny dwarfs which produce cones when only 1 to 2 feet high.

Nor, in the planning of any major excursions, should the great San Joaquin, where much of the primitive vegetation still remains, be forgotten. Of all the areas surrounding the Great Valley of California the ranges on the west side of the San Joaquin Valley, far south, are in summer the most desolate—as if no living thing could ever flourish in that hopeless dryness. But then comes the providence of winter rains in a good year and one stands on the plain in front of the San Carlos foothills and beholds waterfalls of flowers down their steep faces and diadems of yellow on the summits which run out into filagreees of gold on the slopes and ridges. For fifteen miles north along the range, in brilliant sunshine, one surveys that color, for fifteen miles south the eye follows that broad band of pageantry—thirty miles of glory. In such a year uncommon species become common and help outline more definitely the plant associations. In such a year, too, one may get glimpses of the relation of the plant formations to the geological fault blocks. One traces a narrow endemic to a fault line where it stops. In one case a species was found in abundance, which had not been seen before in forty years. It was a so-called “lost species.” The year that I was born in California was not so far from the year in which was published the “Origin of Species” and, as I grew up, everything was most naturally and easily explained by various interpretations of Darwin’s beautiful theory. Some of the new species discovered and published at an early day in California had never been found again and it was explained to us that in the plentitude of evolutionary differentiation of new species more species were produced than could survive. Hence the “lost species” in California. We have quite different ideas now. We imagine we know more about behavior in the soil of seeds of certain native species—dormant five, twenty, fifty or more years, until a year comes when there is a favorable run of low temperatures in connection with appropriate moisture conditions and other as yet unappreciated or not fully understood factors.

Of the early years of the Society I tend to have only happy memories. Nevertheless, it was not always one bright and charming holiday without untoward incident. There were days and even years when discouragements nearly mastered the situation and I was again and again almost ready to give up. But these things were in the end offset by progress and success and especially by the moral support of one's friends, by friends who knew nothing of one's difficulties, but whose faith was unshakeable. Such friends were Anson and Anita Blake, Cornelius Beach Bradley, Samuel B. Parish, Eliza B. Parish, Cornelia C. Pringle, Frederick Hein, Emanuel Fritz and others, too many for all to be listed now.

On one of the Society's excursions a woman member chanced delightedly upon a California black oak seedling in the forest and claimed it for her garden. But she could not lift it out of the soil, nor could two men members who came to her aid, though it was only four inches high. They did not know that the little oak was eight or ten years old and had been insuring its life by giving nearly all to its root system. The California Botanical Society was like that in its first eighteen years. It had put its all in foundational roots. When late in 1929 the nominating committee brought to me the list of nominees of officers for the next year I took the list and drew a pencil through the name of Willis Linn Jepson for president and wrote in the name of George James Peirce of Stanford. I was now certain that the Society could not readily be uprooted. It was ready to flourish above ground and Professor Peirce was the one best fitted to guide it as president during a period of expansion and further development.

The future of the Society lies fair and bright before it. There is every hope that it will extend its usefulness to all parts of California and that its days will be days of inspiring growth and days of true felicity. Its friends will be multiplied and it will in this, our California, live long in the land.

## NOTES ON THE GENUS *RIBES* IN CALIFORNIA

CLARENCE R. QUICK

In the course of field work in the control of white-pine blister rust (*Cronartium ribicola* Fischer) in California, field supervisors have made interesting observations on the distribution and morphology of native species of *Ribes* (wild currants and gooseberries). The following notes include the more important of these observations which have not hitherto been recorded in botanical literature.

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